/78/
3½ in these desert regions. Matting hung before the entrance takes the place of a door.

[62] Figs. 21 and 22.—Huts temporarily occupied by Aymara herdsmen in the region of the Desaguadero (left bank). The roof is cupola shaped. These dwellings are made of clods of earth (drawn from a photograph).

35 41 An inventory of the furnishings and objects found in these huts can be quickly made. I took one; there were mats for sleeping, a clay cook stove, a sort of small enclosure containing burnable material, pottery of different shapes and sizes, a mortar, some spindles, balls of wool, textile fabric which was generally coarsely woven, sometimes some fishing equipment, and finally a broom. Passing into the courtyard one generally notices string, weirs, swords, a loom, and farming implements of European origin.

323 [439] The vessels are not locally produced. They are imported and /Fig. 22 appears here/ come from some indigenous industry of the altiplano. . The pots were shaped on a wheel and bear a

/78 cont./

412 kneeling woman exerts on them is accompanied by gentle rocking, which facilitates the grinding.

/79/ The Uro have no combustible material other than dried animal excrement and tola branches, which they go far to seek. These things are precious, and the Uro, like the Cipaya and the Aymara, are sparing in their use.

231 Near the huts a type of earth niche is sometimes erected which is rather similar to the huts around the village of Chipaya; these are pigsty.

226 Fishing. The Uro, in our age as in pre-Colombian times, draw their main subsistence from the lake. They are excellent fishers. The fish they catch is partly consumed by themselves and partly sold to the Aymara and to the half-breeds of the capital. I did not have the opportunity to be present on a real fishing expedition, only at several demonstrations made at my request. They first taught me the way in which they use the landing net shown in Fig. 23, 1 /see p. 9/. The wooden frame which holds the stretched-out net is fastened to the end of a pole. The Indian plunges this rectangular pocket into the water and remains standing or seated on his balsa until he sees an interesting prey. He begins by lifting his net delicately, then pulls it out of the water with a sudden motion.

227 There is another type of landing net which is much larger. It is composed of a circle from which wooden sticks joined at one end go out. This skeleton, conical in form, is covered with a net. Another net, as large as a hand, is stretched across the opening to make the escape of the fish even more difficult. This apparatus is often of considerable dimensions; some are more than three meters in diameter. They are always equipped with a handle by which they are held in the water and lifted up as soon as the fish have ventured in (Pl. III, 3 /see p. 23/).

The Uro Indians also possess bottom nets, which I regret not having seen employed. I have, however, acquired a perforated stone (Fig. 24, 2 /see p. 10/) which corresponds to our weights or ballast.

/83 cont./

231 Animal raising. They raise guinea pigs in their huts, which renders habitation there even more disagreeable. They have several flocks of sheep, pigs, and cows; those of the latter along the shores of the Desaguadero have become amphibious. They spend the entire day in the water and graze on water plants. From afar one would take them for buffalo in some Balkan swamp.

262 252 Cooking. The diet of the Uro is that of all the Indians of the altiplano: : potatoes cooked in water, chuño (potato fecula), boiled or roasted meat, maize, broad beans, quinua, cañave, etc. The Uro add to this a dish of their own creation: the juicy pith of the totora. The edible part of this plant is the base of the stalk. It does not need to be prepared in any way.

252 [179] The Uro have preserved a method of cooking which is very old and whose distribution in South America, completely unusual, corresponds perhaps to a very archaic cradle of civilization: this is the subterranean oven, or Polynesian oven. "These ovens, which the Uro call vaxaña, consist of a hole dug in the earth whose depth, equal to the diameter, is about 60 centimeters. The rounded edge juts out at the level of the ground, and the entire interior is plastered with clay. The Uro light a fire inside and put in stones which are more or less flat. When the rocks are incandescent they are withdrawn, with the exception of those at the bottom. On top of them is laid a bed of fish, on which is placed a second bed of stones, then a second bed of fish, and so on until the oven is full. It is then closed with rocks which are covered with rushes. The fish thus cooks by stewing" (Palavecino).

251 They preserve fish by drying it on mats after having /84/ salted it. They do the same with the birds, whose flesh is cut up and exposed to the rays of the sun.

273 They make a beer called xawinskania from cañave seeds (Palavecino).

394 [179] Manufacture of balsas. The most important industrial activity of the Uro is the manufacture of rafts of totora, or balsas, to be provided with which partically all the shore-dwellers on the Titicaca come to them. As these small craft deteriorate rapidly.

Carangas—
Chipaya

/116 cont./

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that they inspired in this functionary. The hero of this adventure even had the ridiculous idea of offering to accompany me to Chipaya.

163

The Čipaya are not very prolific. Households with more than two children are rare. I know of only one with five children, two with four, and five with three. Infant mortality is very high, as in all Indian tribes. Couples without children are fairly numerous, and the Čipaya often remedy this situation, which they consider a misfortune, by the adoption of an orphan. For a pastoral people like the Čipaya, children represent a capital asset and contribute to relieving their parents of a part of the work that has to be done by watching over the flocks. Hence their despair if their union remains sterile.

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842
[858]

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[439]

One must include in the number of temporary inhabitants of Chipaya village the people of Salinas who come to buy cheese. These individuals, for the most part repugnant half-breeds or assimilated Indians, sometimes remain there for a rather long period. Some Aymara from Sabaya or Iscara seem to be permanently established in the village. These strangers almost always have shops and sell to the Čipaya coca, alcohol, and some small objects of prime necessity.

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[197]

The language. The Čipaya are all bilingual. Among themselves they still employ a Uro /Uru/ dialect, and with strangers, Aymara. This latter language is tending more and more to supplant Uro and has already eliminated a considerable number of the most common words. This infiltration of Aymara is already so advanced that there are no children over ten who do not speak it, and all the women, although the majority have /117/ never left their village, express themselves fluently in this language. The Čipaya have also undergone a Quichua /Quechua/ influence, as the Quichua elements in their vocabulary show. Spanish has also exercised great power over their primitive tongue. Its effect has

/343 cont./
*196 them devotedly when the sacristan gave them to them. The latter
697 also distributed the small baked clay dishes which had contained the offering of tallow for the illumination of the church to all those who had come.

As if on signal all left the church, the functionaries leading. The two new alcaldes and their wives squatted down in the courtyard before the church, where the Indians came in turn to embrace them or to kiss their hands while bowing low.

692 The Corregidor, who took office the same day, placed himself at the door of his house behind a table on which he had placed the Bolivian civil code of 1831 beside a bouquet of pinks, two silver drinking cups, and a bottle of eau-de-vie. One after the
692 other all the members of the tribe without differentiation by sex
576 came to do homage to him.

They began by bringing the hand to the mouth, then, bending their knees, lightly touching either the book of the edge of the table with a timid gesture. Still keeping their suppliant and frightened mien, they stretched their arms toward the Corregidor and toward his wife as if to throw themselves at their knees. They
[278] next offered them alcohol in two twin drinking cups. /344/ The Corregidor returned the politeness and never consented to reach into the pouch of coca which was offered him without having his accepted in exchange.

An old woman who came late and could not find the Corregidor went to pay her respects to the stick of authority which the latter had left in his hut.

692 Meanwhile the Indians were joyfully dancing, led by the out-
535 going alcalde who was bizarrely accoutred for the occasion. He
[282] had knotted a white and black sling around his body, from which hung skeins of little strings which covered him to the knees. He
[301] had stuck flowers in his hat and tied on two large iris leaves, sold
124 at a high price by some passing Aymara, at the level of his forehead.
834 Brandishing his white banner, he led the troup of musicians and

/377 cont./

Heated by the alcohol, some Indians danced distractedly across the village streets. These were the only manifestations which I observed during this festival.

Pagan-Christian Practices to Obtain Rain.

At the end of January, as the sky remained implacably blue, the Čipaya feared a drought and the destruction of their pastures. After general deliberation they decided to have recourse to public prayers. These were made by all the children, who were obliged to fast during the morning and were then sent in a procession to the church to /378/ circle the cross facing the court in front on their knees. The same ceremony took place before the small chapel, whose steps the children ascended on their knees. A sheep was sacrificed on this occasion, and the four corners of the cross's stand were sprinkled with its blood. The meat /of the sheep/ was consumed solely by the children.

Carnival Festival.

Carnival for the Čipaya Indian is the festival par excellence beside which all the others are only pious duties. At Carnival /Figure 36 appears here/ /379/ although he observes some rites his aim above all is to drink and dance until he falls down dead drunk. If a few bloody scuffles with the people of the other ayas are added to these amusements, his happiness is complete. Carnival is also the only heaven of activity for him, the only moment of the year in which his mind can rest with complacency and of which he thinks in terms of its settledness and unconcern for the future. The prospect of being present at a festival which had been so much extoled was alone powerful enough to keep me in Chipaya behond the time I had set. I had, however, every reason to feel deceived, and the Čipaya themselves showed me their disappointment in a not very successful carnival. Good intentions were not lacking but the alcohol, the precious alcohol, and the no less precious coca. The crisis which elsewhere was tossing up Latin American presidents was depriving the Čipaya of their outlets for the export of their cheeses and condemning them to celebrate Carnival by diluting their alcohol with water.

[TEXT CONTINUES ON P. 110]

Carangas-
Chipaya

/389 cont./

The Chipaya Indians of Carangas have been so deeply impregnated with the influence of the Aymara Indians that we may presume that, in the sphere of medicine, they are hardly distinguishable from their neighbors of the altiplano. It is completely justifiable if their knowledge is more rudimentary because of their isolation and the difficulty which they experience in obtaining the medical substances, almost all of which come from the Yungas. I was able to convince myself of this by examining one day a bag of medicine which had been left by a deceased Chipaya, the father of a young Indian with whom I had a friendly relationship. In the legacy of the old man I found several pharmaceutical products which I had obtained in the Oruro market. The deceased possessed small amounts of them which he had carefully wrapped in some small rags. His son refused to sell them to me, allegedly because of their great value and the difficulty of procuring them. I doubt, however, that anyone in Chipaya could have benefited from them, for, to my knowledge at least, there is no Indian in this village who possesses sufficient skill to carry out their application.

Practically every day in the hut which I was occupying I received visits from Indians coming to ask me for remedies for various ills. The most frequent was constipation, which seems to frighten the Chipaya very much. I was also able to see a hernia and a terrible infection which the Indians treated by applying a piece of llama heart to the abscess. The Indians often called upon me to cure for swellings, the result of drubbings which they had not spared themselves in their domestic quarrels. Some also came to beg me to cure them of impotence. In some not very serious cases of swellings or localized pain, the Indians connect themselves with sticking a coca leaf on the skin.

At present the empirical medicine of the Chipaya seems to be limited to a certain number of insignificant recipes, frequently and easily applied. Faced with a serious case they have recourse to complicated magical processes which I had the good fortune to observe. I should not be able to say, however, if the exceptional

/162 cont./

of which I was still able to obtain (Fig. 2, K /see p. 150/). Today they use long-handled hoes (astuna, takisa) of European make. The seeds are sown from meter to meter in holes they make with this instrument. The natives do not seem to show any attention to sowing in a straight line, and the holes when seen from a certain height give the appearance of wavy and capricious lines.

These fields are not irrigated but could obviously be without much work, given the uniformity of the plain. Some Čipaya with an enterprising spirit have recognized the possibility of this improvement, and this question is at present the object of discussion among the groups of land cultivators. The quinua which grows in these fields is stunted and bears few seeds. The harvest is frequently of no account as a consequence of excessive droughts or frosts. I noticed some faint attempts at cultivating barley (1) in the shelter of several broken down enclosures.

1. The Čipaya while traveling dig up a tubercule (sica) which they say is the root of the tola, and they appear to be very fond of it. As far as I am concerned I found it tasted sour and insipid. Another wild tubercule (sawkxpero) was pointed out to me as being edible also.

Trade. The Čipaya make cheeses, which constitute their chief industry and the source of their wealth, out of sheep's milk. They trade it for everything they need to live and which nature denies them: maize, quinua, barley, broad beans, potatoes, dried fish, coca, and alcohol. These products are brought to them by Aymara traders or mestizos, who generally come from the region of the Salinas, from Coscimendoza. The Čipaya economy hence rests in large part on trade. They themselves sometimes go to the

/162 cont./

439 neighboring Aymara villages to dispose of their small cheeses directly and specially to sell pig fat /163/ /Figure 2 appears here///164/ which, after cheese, is their most important export. They undoubtedly trade wool, although I was not able to obtain any precise information on this matter. I only ascertained that pieces of cloth started in a neighboring village were given to Čipaya women to be finished. Formerly some Čipaya would go to hire themselves out as workers in the "salitreras" (exploitation of nitrates) of Tarapacá. [190] They returned with some knowledge of Spanish and new tastes. This stay away from home had the result above all of opening their eyes to their poor condition and to make them discontented. Since the nitrate beds have been abandoned, nothing remains to draw the Čipaya outside their "bare plain."

433 459 The crisis of overproduction which rages over the whole world upset the economic life of the Čipaya. The low quotations for tin on the Stock Exchange, or the New York exchange, led to the closing of the mines, the departure of the laborers, and the sale of cheese at a loss. The Aymara no longer come to Chipaya to stock up on cheeses, and the latter accumulate in the round huts and there is no alcohol or coca for festivals. By virtue of the economic cohesion of all humanity the Čipaya themselves are also overproducing, and their present distress is the sister of the one which constricts the hearts of the great proprietors of wheat fields.

648 These particulars show us that in spite of their apparent isolation, these Indians maintain constant relations with the outside world, and that the fossilization of this tribe is not as total as one might conclude from their material culture.

234 Hunting. Hunting and fishing play only an insignificant role in the life of the Čipaya. In all, for game they have a few herds of vicuña which make their appearance in the neighborhood of the village, water birds which abound in the numerous lagoons which cut their pastures, and tuco, a kind of small rodent a little [242] larger than a rat. Posnansky (1) asserts that the latter constitutes the principal food of the Čipaya.

[TEXT CONTINUES ON P. 151]

/165 cont./ It is more than for food that the Čipaya amuse
224 themselves trapping them with small reed baskets, which are sold
[224] to them by the Indian peddlers who come from Andamarca or
[171] Orinoca. These openwork baskets are, it appears, real fish traps which the shore-dwellers on Poopó use. The Čipaya use them to hold small objects (Fig. 3. B /see p. 155/).

Preparation of Food

252 It is more to relieve my conscience than in the hope of presenting new facts that I shall devote a few lines to Čipaya cooking.
[171] Their food and the preparation of their dishes are exactly those which have so often been described in connection with the Aymara and Quichua.

The quinua cuticle has, as is known, a bitter and disagreeable
[439] taste. To free the seeds from it they are grilled in a dish, then soaked in a stone vat (taksira) (Fig. 2. J /see p. 150/) which the Čipaya buy from the people at Huachacalla who make them (1).

1. The vats are sometimes of baked clay.

When the seeds have been softened, a woman takes a standing position in this vat and leaning against a wall, she husks them by turning the lower part of her body (Pl. V, A /see p. 214/). To see them execute this strange gymnastic is a picturesque spectacle. The seeds submitted to this treatment are then spread on a blanket and winnowed by hand.

252 The quinua is used to prepare a soup or, reduced to meal
262 (akwal'ipe), a pap. Leaves (čalli) of this plant or of cañagua are cooked in water like spinach greens. Maize (tara) is eaten roasted (tsars-tara) or boiled the same as beans. The Čipaya eat /166/ potatoes (axina), as everywhere on the altiplano, in the form of čuño.

Cavineau-
Chipaya

/166 cont./

253 Too many authors have spoken of the preparation of these potatoes exposed to frost and dried for it to be necessary for me to linger on it. This effort would be all the more superfluous since the ʔuño which the Čipaya consume is bought from the Aymara. Several times I saw the Čipaya make a paste of ʔuño by crushing them in their mortar. The latter is a flat stone (t'ax), slightly sloping, on which the grinding is done with the help of another flat stone (muruku) which goes and comes (Fig. 2. G /see p. 156./).

Meat is always boiled, probably because of the fuel, which burns without a flame or gives off, in the case of tola, an acrid smoke.

254 The food is served in bowls (ʔua) (Fig. 2. D /see p. 155./); liquids are taken with a spoon (wisi'a) (Fig. 2. F) and solids with the hand. At feasts the host spreads out the dishes he is offering to his guests on a blanket, and the latter take them in a flap of their clothes.

273 Preparation of chicha from quinoa. After being hooked, quinoa seeds are roasted again. They are then reduced to flour, from which a bowlful is taken out and conscientiously chewed by a woman. The portion soaked with saliva is mixed with the rest of the flour which has been spread on a skin. The whole is boiled and then poured into a large vat to which more hot water is added. The liquid is left to ferment for four days. The drink (k'lea) then obtained resembles muddy water and is very slightly alcoholic.

284 Production of cheese. Although the cheese industry is in the foreground of the economic activity of the Čipaya, the technique used is one of the most rudimentary. The rennet is prepared with a piece of fetus tripe of a llama or vicuña which is soaked in water. It is enough to pour a little of this liquid into sheep's milk to turn it into cheese. The cassis, after having been pressed between the hands, is put into small straw rings which are superimposed and separated each time by a fragment of palm-tree bark, a material which is used to wrap the small packs of coca which the Aymara sell to the Čipaya. When the pile of cheeses is high enough it is

Reference--164 E-5 (1930-1931) 1935, 1936 5934 thru 5934
Carnegie—

/174 cont./

women wear. This liquid, which smells horribly of ammonia, is an excellent cover of grease, the only thing which can give some suppleness to their greasy mop. This peculiar washing made me understand the reason why there was a receptacle in a corner of all the Cipaya huts which the owner of the house used as a chamber pot and whose contents he guarded with care. When I assert that this toilette is the only one which the Cipaya women practice, I exaggerate nothing. Throughout their lives they never wash and their skin is covered with a veritable crust of dirt. Their clothes are rarely washed and tattered, and only during festivals do they put on a new skirt or poncho. /175/ /Figure 6 appears here./

/176/ Technology

Ceramics. The pottery of the Cipaya Indians is not indigenous. It comes to them from the Ayoreos who trade it (Fig. 6 /see p. 165/). The center of this industry is situated near Puntierras in Cuzco province where beds of clayey earth are found. I shall always regret not having been able to visit this locality to observe the making of ceramics on the spot. Without any doubt I should have discovered there the survival of ancient pre-Columbian techniques. Since the form of the vessels and jugs coming from this place is exactly that with which we are familiar from Andean archaeology, (177) the mill shaped those as in the times of the Inca empire, and other receptacles which reproduce ancient types characteristic of this part of the altiplano (Fig. 3, E-4 /see p. 159/). It is not only in the style of these ceramics that we ascertain the influence of pre-Columbian models, but in the very manner in which the aryballos is carried on the back is a continuation of old Inca traditions. By means of a rope of llama wool ingeniously combined, the women bear the large aryballoid jugs on the back, exactly like the Indian depicted on a China vase.

[See continued on p. 166]

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Carangas —
Chipaya
Aymara SF5

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2:Métraux--165a E-5 (1930-1931) 1935, 1936 SF24 Uru SF24
Carangas--
Cáipaya
Aymara SFS

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Fig. 6.—Čipaya material culture. Ceramics

A: Small jug of Aymara origin used by the Čipaya.
B: Aryballoid jug (½) imported from Parinacota (Carangas Province) (from a sketch).
C: Small pot (½) imported from Parinacota.
D: Jar imported from Parinacota (from a sketch made from life).
E: Large, slightly asymetrical jar imported from Parinacota;
b: detail of one of the ornaments on the neck.
U [303] F: Small jar made without a potter's wheel (Chipaya).

Cayanga-
Chipaya

/176 cont./

Besides these vessels of archaic form which have not been shaped with the help of a potter's wheel, the Čipaya use locally produced receptacles, the technique of which is more advanced and influenced by European civilization. These vessels are produced in quantity in various regions of the altiplano and bear trademarks.

The Čipaya take good care of their ceramics, each piece of which represents a pecuniary sacrifice for them; hence many pots for daily use are wrapped in a protective sheath of undressed leather (Fig. 8, C /see p. 185/).

The names (maske, tiŋ, ʔuu yuru, oʔ, yakina) that the Čipaya give the different pieces of pottery they use are always Aymara. One can deduce from this that the Uru did not know this industry or that they have been dependent on the Aymara for a long time in this respect.

Spinning. The raw sheep's wool (oʔ-ʔuma) or llama wool (uwal-ʔuma) is rolled around the left arm and spun by means of a spindle (t'uri) (Fig. 4, H /see p. 197/). The spindle stick is not commutated by any enlargement. The weight /whorl/ (wallu) is now of turned wood, but I was still able to obtain two specimen crudely carved with a knife.

To spin, a bit of wool is pulled out and attached to the spindle by a /177/ slipknot. The movement communicated to the spindle is made by holding the thumb against the index and middle finger of the left hand, from right to left. When the spindle has begun to turn, the male or female spinner rapidly brings the right hand toward the left, following the thread (kaun) being formed. This movement is to even the thread. Once the hands are together, he draws out the wool and repeats the twisting movement. The spindle is suspended at the end of the thread, or, when the spinner is seated, it turns in a bowl (Pl. V, 2 /see p. 214/). When a certain length of thread has been obtained it is unrolled from the top part of the spindle and rolled on below. A new loop is made and the spindle is placed in action again in the way indicated. The threads obtained by this method are generally very thin. For weaving

Smithsonian--170 E-6 (1930-1931) 1930, 1936 SFSA Uru SFSA
Cayuga-Chipaya

/179 cont./

383 Rope-making. Ropes (hoŋ, hoŋtu) are made of llama wool or straw, the former twisted or braided. To make them, the Čipaya take a bundle of raw wool in the right hand and twist it by hand and gradually roll around a ring held in the left hand. The ropes and cords of wool (koiya, tuanda) serve as belts for the men or are used to fasten loads on the backs of llamas.

Straw ropes are used practically exclusively in the construction of houses, where they tie the different pieces of the framework of the roof and fasten down the straw which covers it.

(384) These ropes are made by the women: they hammer each handful of straw on the back of their overturned grindstones with a round rock provided with depressions which facilitate handling it. The stalks once softened are moistened. The woman twists some of them to make a strand (ɲ̃ɨ-ɨ̃oiya). She does the same with another pinch, then applies a rotating motion between her palms to these two strands. So that the straw will not dry out during the process, she holds it sheltered under a blanket and herself dampens her hands frequently.

385 Basket-making. Basket-making is a local industry in Chipaya. /180/ Their circular baskets (pan pay) with a small perpendicular rim are all of one type although of different sizes (Fig. 3, A /see p. 155/). They are composed of small coils of straw turned upon themselves in a spiral and held together by leather ties (Fig. 3, A, B). This technique is the one that ethnographers in the English language call "coiled."

386 The small openwork baskets (ɨ̃ɨ̃ ɨ̃apa) are, it appears, fish traps which the Čipaya buy from the people of Orinoca or Andamarca (villages situated near the banks of the Poopó).

Reference--177 E-5 (1930-1931) 1935, 1936 EP34 Urs EP34

Cayanga-
Chipaya

/160 cont./

In La Musique des Incas /The Music of the Incas/, R. d'Harcourt reproduces several similar flutes as well as straight flutes with mouthpieces of an identical construction. He was, unfortunately, unable to give anything more specific than "Bolivia" for the provenance of these instruments.

While examining the contents of one of the huts that the Chipaya use for storage, I had the good fortune to discover a flute with mouthpiece made from a wing bone of a condor (Fig. 8, G /see p. 173/). The birch inserted in the opening is, as for the preceding flutes, made of wood, and it also has six holes.

If the mellow flutes with which we have been occupied up to here are locally produced, this is not the case with the pinkul'o, another type of flute with mouthpiece which is of a more complicated construction although based on the same principle. The six holes are contrived on a slightly depressed surface which facilitates the play of the fingers. Figure 8, C presents one of these pinkul'o, which I acquired on the frontier of Bolivia and Argentina. The Chipaya pinkul'o are identical and without doubt come from some bolivian village. They abound in all the Aymara and Quichua markets.

The tola flutes with mouthpieces are often provided with a small rounded whistle near the mouth. Unfortunately I never had the opportunity to acquire a specimen of one, the owners of these perfected instruments always refusing to sell them to me.

The flutes with mouthpieces receive the name, in the Uro-Chipaya dialect, tiku, a generic designation for "flutes." These instruments are basically used for /166/ secular purposes and have no other end than to enliven festive days.

While there are very few Chipaya who know how to play the quena, almost all the men have a flute with mouthpiece and take part in the concert which is organized on festive occasions. The Indians accompany themselves on this instrument even while executing intricate figures. During a religious ceremony the Indians may also play a little melody from time to time while seated.

[137]
the altiplano in general. The ligature in this case is made of a reed rolled around the two rows of pipes.

When the Indian who sold me the old syrinxes wanted to show me how to use them, he was careful to take two of them and to play them by placing one on the other so as to have actually a Panpipe with two series of pipes.

[138] Few Čipaya play the syrinx, the few who were capable of it having learned it from the Aymara, and I noticed that during festivals it was almost always some Indians of this race who made the slightly hoarse sounds of this instrument resound. The Čipaya give it the name taka or use the Aymara term phusa.

[139] String instruments. The only string instruments of the Čipaya are manufactured guitars which come to them through the intermediary of Aymara traders.

The conclusion which Mr. Izikowitz draws from his study on Čipaya instruments are the following:

1) These Indians lack idiophones and original string instruments.

[140] 2) They have adopted flutes with mouthpieces and clarinets from the Europeans.

3) In the post-Columbian period they changed the shape of their drums which have become square and are also provided with a drum cord.

4) The trumpets are probably old but the material is entirely modern.

[141] 5) The Čipaya received from the Aymara the quena, an old, pre-Columbian instrument whose system of holes has, however, been modified under the influence of European flutes.

6) They have two kinds of syrinxes which appear of a type more archaic than the modern Andean Panpipes and even than the archaeological flutes with two series of tubes. The Čipaya syrinx, however, seems to have been modified in one way or another under the influence of the syrinx with a double series of tubes; only in this way can one explain its peculiar form. With the exception of the

5:La Barre E-5 (1937-1938) 1946
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edge of the pontoons. The whole makes a sea-sled type of hull, which will not easily overturn even in the fierce storms of Lake Titicaca.

The balsa is poled along with a stubby trident, the wood for which comes from the yungas east of the Cordillera Real. In the open lake, a trapezoidal reed sail is rigged on two poles stuck deeply into the pontoons and forming an inverted V. The balsa is unable to tack in the wind, however, for it lacks a centerboard. Balsas are dragged onto the land from time to time lest they become waterlogged and rot. Though they may be bought for 10 to 16 Bolivian dollars (bolivianos), they represent much labor.

MANUFACTURES

Uru material culture is simple. Owing to the lack of trees, the giant totora reed (*Scirpus tatora*) is of extraordinary importance, providing material for fishweirs, roof mats (pl. 117, *top*, *left*), floor and sitting mats, rafters, doors, balsas, sails, and even food for animals and people. Metallurgy is unknown. Pottery making has been abandoned in recent times.

Basketry.—Crudely coiled baskets and twined tortora reed baskets are made.

Textiles.—The *Uru* make twine bird nets, mats of various types, sails, grass rope, and simple baskets (both coiled and twined). Women spin llama wool as incessantly as the men make grass rope, using a wooden spindle. They weave the yarn into cloth on a simple bar loom staked taut on the ground (pl. 116, *top*), rolling up the finished cloth on the end bar. When the end of the warp is approached, they weave from the other end, and finally fill in the last intermediate strip with a needle. Knitting is not pre-Columbian here, but *Uru* women are very skillful in knitting *Aymara*-type caps (gorros), often with amazingly intricate animal figures and other designs. Men's slingshots are very beautifully braided of wool with varicolored diamond designs like the markings on snakes. The *Uru* also make thongs of twisted rawhide still retaining the fur, and heavy braided woolen ropes for lashing loads on burden animals.

An extremely interesting textile, apparently unique to the region southeast of Lake Titicaca, is a kind of feather cloth described by David Forbes (1870). The down of lake birds was spun into thread, and then knit into caps and children's socks and gloves. Only a few specimens of these exist in museums.

Weapons.—To make bolas, the *Uru* buy cotton thread from traders and wind this tightly around a cord Y to make a durable bird-hunting weapon. A straw-cord bola perdida, similar to that of Patagonia, is also used.

Metals.—The *Uru* know no metallurgy, although the *Aymara* of Jesús de Machaca, scarcely a day's journey away, are famous for their

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metal casting. Some of the pins (tupus) which women use to fasten their clothing at the shoulder, are probably generations old, perhaps having been taken from chullpa graves. All other metal objects are obtained by trade.

Pottery.—Although not now made at Ancoaqui, pottery was formerly produced in simple styles: a plain reddish, round-bodied olla with a narrow neck and handle, and a large, crude hemispherical bowl with a bent-out lip and two loop handles.

Stonework.—Metates, mullers, and hammers made of a round stone lashed with rawhide to a stick, the small hand stones of bolas, and fish-net sinkers are the only objects made of stone.

Woodworking.—Weaving frames, distaffs and spindles, balsa poles, spear handles, hooks for tightening balsa lashings, and a few other articles compose the list of wooden objects. Wood is a valuable substance in this treeless region, procurable only by trade or travel to the yungas.

Musical instruments.—All *Uru* musical instruments are duplicates of those of the *Aymara:* the open-ended flutes (palawatu, kena, pusipis, and kenakena), flageolets (kena mari-macho, koiko, pinkilu, and tarka), double panpipes, i.e., in two graduated rows (siku, siku-choklo), and the drum. No stringed instruments are present except the armadillo-carapace ukelele or charanga.

ECONOMICS

The only *Uru* articles of commerce are dried and salted fish, balsas, and the large totora reed mats which they make for Bolivian cholo huts. They exchange these for frozen and dried potatoes (chuñu), coca, thread to make nets, quinoa, wooden poles, metal objects, and other indispensable goods like medicines and dyes.

The sexual division of labor is simple: men fish, hunt, make and repair nets, and manufacture balsas, mats, musical instruments, and their own tools; women spin and weave llama wool, cook, and make baskets and, formerly, pottery. Women trade all goods except balsas.

SOCIAL AND POLITICAL ORGANIZATION

Not much remains of pre-Columbian *Uru* social structure, for a scattered and diminishing population has not been able to preserve it functioning. The *Uru* are grouped into ayllus, named Titicana, Konko, Kama, and Kuipa, and their territory is physically divided into nonexogamous moieties: ti achai (corresponding to *Inca* anansaya), and xanacha (*Inca* mana-saya). The kinship system is fragmentary, and highly descriptive in its present, perhaps, degenerate form. It is apparently a bilateral system which does not distinguish between paternal and maternal uncle, or aunt, or grandparent. Like

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earthen sties, or mud-and-stone conical huts. I observed no cats at Ancoaqui, though they occur in Aymára villages a day's journey hence.

Agriculture is unimportant among the Uru, although they cultivate *kañawa* (or "quinoa," Uru *kuša*, a millet-like grain) from which they make a toasted ground powder they call *pitu*. It is pleasant tasting and is very concentrated and nourishing. They also cultivate a small amount of "papas amargas" or small, bitter potatoes from which they make *luču* (Uru *awa*). The succulent white roots of the *totora* reed (*suju*, *kawi*, or *kuima*) are commonly eaten raw by the Uru. These vegetable products they augment in their trading of fish to the Aymára.

Kañawa is ground on a stone slanting outward from the woman's lap with a flat stone bar, whence the ground grain collects in a cloth at the far, lower end. The Uru make a beer they call *likla* or *likli*, or *sawiskawia* according to Palavecino. Posnansky (page 102) says they sometimes make *chicha* of masticated maize also; *likli* is made from a plant called *kiwi* or *kiwi*, which he supposes is aquatic. This same author considers the Uru somewhat more abstemious of alcohol than the Aymára but this is probably less a result of inclination than extreme poverty. This Bolivian student notes also as a food of the Uru "camaroncitos [?shrimp] transparentes" (Uru *koykoya*), Amphipods of the group *Hyalella pallida*, *H. robusta*, etc. from two to ten millimeters long, which live in the *totora* roots. Toasted, these are a rich, nutritious food in times of scarcity, as well as an "estimulante sexual." The Uru chew *coca*, of course, as do all Andean natives, trading their fish for it with the "cholo" or halfbreed tradesmen who bring the narcotic leaf from the *yungas* or deep semi-tropical valleys of the Departamentos of La Paz and Cochabamba.

Fishing is the basis of Uru economy, however, as it appears to have been throughout the period of European knowledge of them. Fishing by moonlight I was told is preferred as the best time. Fish fences, *kawla*, of *totora* bundles stuck in the soft mud of the river bottom were observed several times in the Desaguadero. They are of the same type that is used in the swampy shallows of southern Lake Titicaca. Palavecino thus describes their construction:

> Each of these [bundles] is made of five or six reeds placed in the same direction and attached by the upper thinner part. They carry these bundles in their *balsas* to the place which appears to them best for fishing and there build their weir. To drive the bundles of *totora* into the mud they use the gaff (*oksa*) with which they push their boats. [This is a stout pole with a stubby tripod at the base, so that it will catch on roots and water plants and not sink into the soft mud when the boat is poled along (W.Lab.)] The bundle is placed against the gaff, the end of which rests on the liga-

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wooden balls and a small grooved, ovoid stone for the handgrip.[8] They have no firearms, nor have they ever possessed them apparently. The bow and arrow is likewise lacking; spears are used only in obtaining fish.

An interesting group-hunt at determined periods employs both men and sometimes women. They stretch in selected sites extensive nets, sometimes hundreds of meters long, for birds whose flight is near the surface of the water; the nets are extended below the surface also, to prevent the escape of diving birds. They anchor the nets to faggots or clumps of *totora* set in slightly curved lines. Then hunters in their *balsas* make much noise and frighten the birds into the almost invisible nets, where they can despatch them with clubs (*yokowa*), and kill with their *balsa* those which attempt to escape. Uru also eat the eggs (*kiki*) of aquatic birds. The flesh of the birds is cut into strips, hung in the sun, and dried into a kind of *charqui* ("jerky," from the Aymará *tarki*).

The Uru do little hunting of land animals. Vicuñas (*Auchenia vicuña; suhaja*, a word obviously related to Aymará *haja*, llama) are extremely scarce or absent, as are also guanacos. It is said, however, that in winters of very extreme cold[9] small groups of vicuñas may stray down into the Desaguadero region. The head male of the herd is lassoed, and the others of the herd, immobilized by the cold, are speedily killed. The small rodents of the pampas, like the viscacha (*qhiñi*), apparently are not hunted by the Uru. Most of the birds they kill, like a good proportion of the fish they catch, they take to the villages to trade for other food and necessary articles, since these are their sole source of revenue, beyond their *balsa*-making.

Material Culture. The stalks of the giant reed *totora* (a *Cyperaceous* plant, *Scirpus totora*) are surely the most important substance in Uru material culture: of them they make fish-weirs, supports for bird-nests, roof-mats, floor- and sitting-mats, rafters, doors, *balsa*-boats and their sails; and the few cattle they have browse upon the roots of the *totora* as well. Unless *balsas* are frequently removed from the water and thoroughly dried, they last scarcely longer than a year or two before rotting. The Uru *balsa*-builders are famous and supply many of their Aymára neighbors with them in the southwestern region of Lake Titicaca. The reeds must first be cut with

[8] An Uru *bola* from the Desaguadero is now in the possession of Dr Frank G. Speck, in his private collection at the University of Pennsylvania.

[9] The Aymára have a phrase to designate extreme cold or "brass-monkey" weather: *q'ala* ("stone"), *hatuya* ("to split"), *wari* (vicuña), *q'asiya* ("makes cry"), i.e. weather cold enough to split stones and make the fluffy-coated vicuña scream. The Aymára schoolboys in La Paz—according to my "cholo" interpreter, the late Moisés Alvarez, who was one of them—have made a very effective football ("futbol") yell of this familiar phrase: *q'ala hatuya wari q'asiya, ara ura!*

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ciñawa) for the manufacture of grass rope. This I noted was of two kinds, depending on its use: three-element braid for *balsas*, two-element true rope for twining the several kinds of mats, called *lamara*. The women make simple baskets too, or did until recently. These the women sell, as they do all other articles they manufacture.

The women spin (*pewaw*) llama-wool (*pewañ*) as incessantly as the men make grass rope. Usually they use a wheel or spindle, weighted with the yarn already spun wound around it, sometimes freely suspended as they walk along the road to market, sometimes with a bowl when sitting; but they spin between the palms also. This yarn they weave (*wa[']ji*) into a coarse cloth on simple tension looms staked to the ground. Both men's and women's clothing is made of this native homespun. I was told that the Uru do not weave so much as formerly, because of an obscure superstition that "it will go bad with them after death"; but I observed several looms in operation at Ancoaqui. The cloth is woven and rolled on one of the end bars until nearly all the warp is used up; then the weaving is done from the far end leaving an open space which is filled in with a large needle after the headrod is removed. That is, they weave from one end, and when nearly finished, they weave from the other. Only women use the native ground loom and the men the colonial Spanish crude foot loom. There were none of the latter in operation at Ancoaqui during my stay but the adobe frame of one foot loom observed was similar to those of the Aymára. The women's wide girdles or *lazi* are woven on looms also. The colors of the cloth are usually black or natural wool color but sometimes they buy modern coal-tar dyes for brighter colors in their *coca*-sacks and the like.

Knitting is probably not pre-Columbian, at least in the current styles, but the women are very skilful in knitting *gorros* of the Aymára type (Uru *lkawa*), often with amazingly intricate animal figures and other designs. The men's slingshots are made of llama wool also, circular-braided in a number of very pleasing designs like the markings on snakes.* The felted wool hats I believe are not made by the Uru, but bought from the Aymára at Guaqui, Tiahuanacu and elsewhere. The Uru, however, do make thongs of twisted rawhide with the fur left on, as well as heavy "sogas" or woolen ropes for lashing burdens on llamas and donkeys. The Uru *balsa* (Aymará *lłwi*, Uru *k'oči*) use cords unlike those of the slingshots which are woven,

* Bandelier wrote (*The Islands of Titicaca and Koati*, New York, 1910) that there are no snakes on the *altiplano* whatsoever, but we killed a small one on the site of Bennett's diggings at Lacaxmata on the southern shore of Lake Titicaca. It was about 18" long, with greenish-gray spots on its back. It is called *anire* in Aymará and grows to two or three feet in length.

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Religion. Nothing remains of Uru religion which is identifiably non-Aymára. In a swamp north of the village of Ancoaqui I noted an offering to some power or other, which consisted of three bowls, one over the other, in the reeds. Like the Aymára, the Uru believe in the interpreted significance of dreams.[39] The three- or four-stepped adobe pyramids in Ancoaqui I am unable to place as either an Hispanicism or an ancient survival; Posnansky would accept them as evidence of Arawakan affinities of the Uru. There are four or five of these at Ancoaqui. One has a cross atop it: the *cura* from Guaqui makes rare visits to the town.

According to Posnansky, the Uru have the following gods: *Ťwintatito* (= Aymara *Ťunupa?*, = a sun-god?), *Kjotsamptŝi* (a god of the Lake from Aymara *q'ota*, "lake"), *Ťuhun-uuvo-samptŝi* (the goddess of the Lake), *Puluni-samptŝi-malku* (god of fishes, from Aymara *malku*, "lord, master, chief"), *Čep-kaluari-čiči* (god of potatoes), *Kjosi-samptŝi* (god of the earth) and *Samptŝi-malku* ("god of the ancestors"). The willingness of this author to indulge in pure fantasy, however, leads us to be cautious even about such an etymologically plausible list. Métraux says that "Tout ce qui, dans ce mémoire [of Posnansky] concerne la religion actuelle des Uro est du domaine de la fantaisie," and avers that the chief deity of the Urus is *Pachamama*, an earth goddess of the Aymára. Near the door of every hut is a spot of blood, souvenir of the sacrifice made to the spirit of the place when the house is roofed; potatoes, alcohol, and *coca* are offered to the gods and *Pachamama*.

Mythology. The Uru appear to have preserved a few of their own traditions and myths. One of these,[40] however, appears to check with an ancient folk-tale preserved by Betanzos:

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[39] The Uru of Ancoaqui, quite surprisingly, believe in the superstition of "three-on-a-match." This is said to be only as old as the Crimean War, when cigarettes first began to be popular: a match lit long enough to light three cigarettes gave enemy marksmen an opportunity to shoot the smokers, hence the "bad luck" of lighting three cigarettes on one match. If this is the true explanation, it is amazing how the practice came so quickly to the isolated Uru. However, in a world increasingly integrated, the discovery of South Africa copper reserves and subsequent fall of the price of copper on the New York Stock Exchange intimately affects the religious life of the Uru of the Desaguadero swamps; for when the giant American copper mines in Bolivia (American Smelting at Corocoro, subsidiary of the Guggenheim interests) shut down, the Aymára miners cannot buy Uru fish, and the Uru cannot then buy quinoa and *coca*. And *coca* is an indispensable ritual substance in nearly all Uru ceremonies.

[40] Posnansky, *op. cit.*, pp. 84–85. Métraux (JSAP 27, p. 88) gives a version of the same Uru tale, of which he got a more complete example from the Chipaya: "Formerly there was a cataclysm which annihilated all humanity, with the exception of the Uru. This is why they speak a language different from that of other Indians. Tiahuanacu and its temple existed before the sun was created. They had been built by the Inca. When the sun appeared in the sky, the temple and Tiahuanacu fell down."